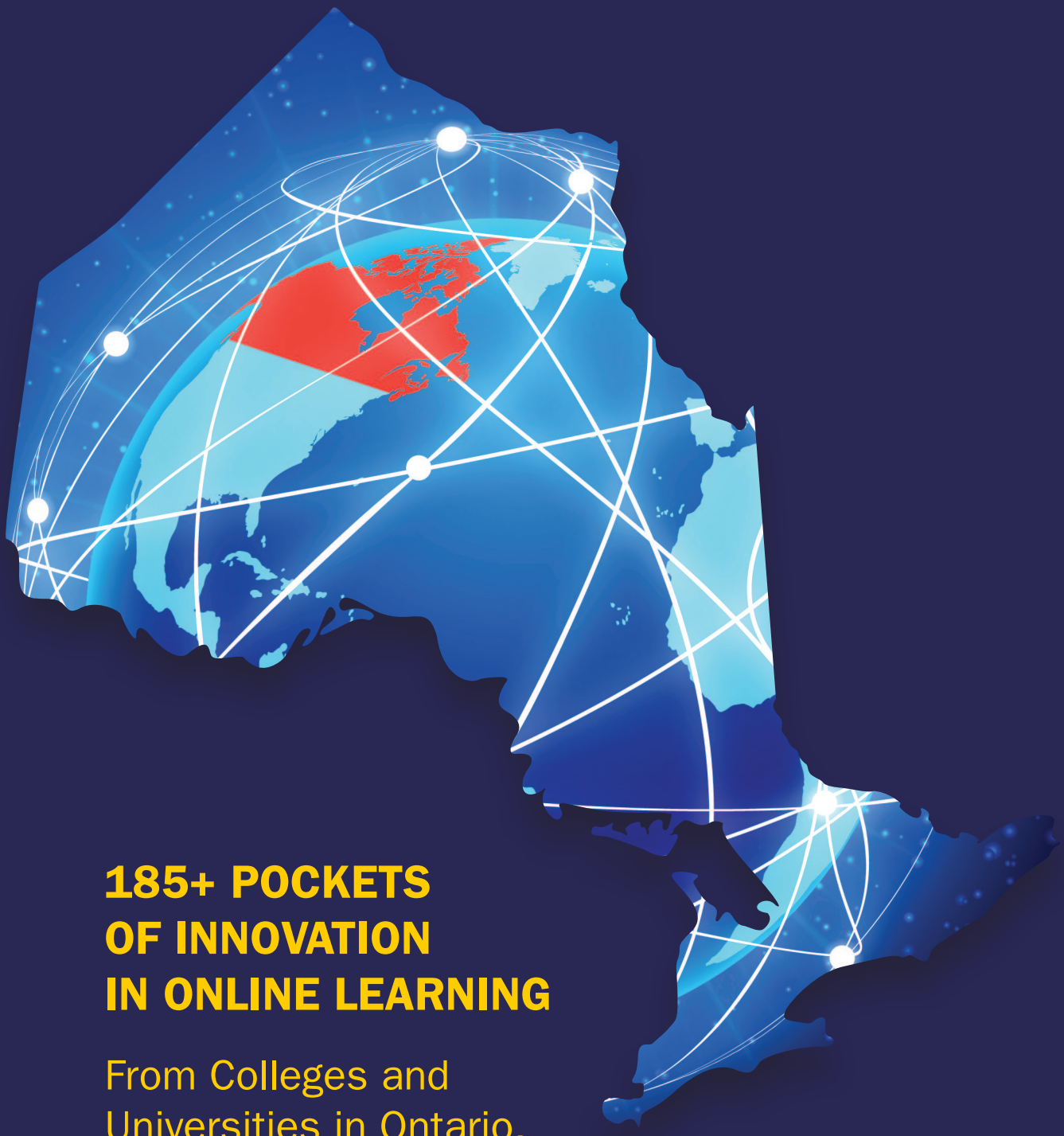

185+ POCKETS OF INNOVATION IN ONLINE LEARNING

From Colleges and Universities in Ontario, across Canada and around the world

CONTACT NORTH NORD Online Learning Apprentissage en ligne

185+ POCKETS OF INNOVATION IN ONLINE LEARNING

From Colleges and Universities in Ontario, across Canada and around the world

Highlighting 9 Themes:

1. Educational Design, Courses and Resources
2. Diversity in Blended Learning
3. Student Access, Engagement and Flexibility
4. Supporting Student Success Online
5. OER and MOOCs
6. Options for Online Assessment
7. Faculty Development and Support
8. Models of Collaboration
9. Organizational Planning for Online Learning

April 2018
teachonline.ca

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Reflections on the Pockets of Innovation Series

The Pockets of Innovation Series

Higher education in Ontario, across Canada, and around the world is a hotbed of innovation focused on expanding and improving learning opportunities and increasing success for students through online, blended and technology-enhanced learning.

Since 2011, Contact North | Contact Nord interviewed over 200 innovators at colleges and universities to learn about their online teaching and learning initiatives, specifically the inspiration and motivation for their innovation, its design and delivery, benefits, challenges and potential for further application.

The Pockets of Innovation Series on Contact North | Contact Nord's teachonline.ca portal showcases more than 185 ground-breaking projects focused on:

- transforming the teaching and learning experience;
- increasing excellence and student success;
- enhancing engagement and flexibility;
- providing training and support for students, faculty and instructors; and
- benefiting from the multiple opportunities offered by collaboration and new technologies.

The Pockets of Innovation Series includes initiatives from 23 public colleges and 21 public universities in Ontario, as well as higher education institutions in 6 other provinces of Canada, including British Columbia, New Brunswick, Newfoundland and Labrador, Nova Scotia, Prince Edward Island, and Québec and 15 countries around the world: Costa Rica; Denmark; France; Germany; Iceland; Ireland; Israel; Italy; Norway; Scotland; Spain; Sweden; Switzerland; United Kingdom; and United States.

Pockets of Innovation are grouped in three geographic categories – Ontario, Cross Canada and International. Each one shares three essential characteristics:

- They represent a new approach;
- They directly support students; and
- The developers are prepared to share their innovations, the challenges they encountered and what they learned with colleagues in Ontario and around the world.

Emerging from the more than 185 Pockets of Innovation are 9 broad themes, showing how these initiatives encompass all aspects of online teaching, learning and organizational planning:

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3 Student Access, Engagement and Flexibility

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Each of the more than 185 innovations in this compilation continues to provide information and inspiration for faculty, instructors, staff, management, policy makers and funders. The Pockets of Innovation Series features more than 135 innovations from faculty and instructors in Ontario public colleges and universities and, in 2016, expanded to include initiatives from faculty in colleges and universities across Canada and internationally.

Contact North | Contact Nord launched the Pockets of Innovation Series in 2011 and, as the dedication and creativity of faculty continue unabated, is continuously adding new examples of ground-breaking projects to its portal, teachonline.ca.

Launched in 2011, teachonline.ca annually offers 275,000 faculty and instructors from around the world access to the latest trends, best practices, training opportunities and teaching resources in online and distance learning.

Theme 1
Educational Design, Courses and Resources

Mobile Options

Unique and Specialized Resources

Applied Learning

Interaction

Interdisciplinary Learning

Virtual Reality

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Theme 1
Educational Design, Courses and Resources

Post-secondary faculty members have developed and adapted a plethora of educational designs, courses and resources in a multitude of formats to respond to student needs for access, alternative approaches to learning, unique and specialized resources, applied learning opportunities, and interaction.

Examples from the Pockets of Innovation Series illustrate the scope and contributions to teaching and learning of innovative learning designs, courses and tools.

Mobile Options: At numerous colleges and universities, including Lambton College, George Brown College, and Nipissing University, all in Ontario, and the Université de Sherbrooke, Québec, Canada, concerted efforts are applied to the development and/or conversion of resources so they are accessible on mobile devices, offering students anywhere, anytime learning that fits with their complicated and demanding lives. At Conestoga College, Ontario, tablets are part of face-to-face classes in Business Maths for enriched teaching and learning, with lecture support material, the professors' in-class work and comments, practice exercises, and student notes shared and stored for later review.

The integration of e-books, whether developed as an institution-wide initiative in concert with publishers as at Algonquin College, Ontario, or as course-specific resources as at the University of Windsor, Ontario, expands textbook availability to all students. Using their choice of device, students can access text, visuals, quizzes, and other rich media at prices far below that of print textbooks or as open educational resources (OER).

An open source web conferencing system, BigBlueButton, was developed in the Technology Innovation Management Program at Ontario's Carleton University for students to communicate and collaborate without the necessity of meeting on campus.

Students at the University of Barcelona in Spain have subsidized access to commercial learning resources for self-directed learning of a wide choice of languages on their choice of device. At Athlone Institute of Technology, Ireland, faculty worked with flipped classrooms models, universal design principles and other strategies to support access and success.

Unique and Specialized Resources: Online resources provide access to a broad range of resources, including collections that might otherwise be restricted, new resources designed to meet a specific learning and virtual lab specimens. Examples from the Pockets of Innovation Series include:

- the digital archive at Algoma University. Ontario, dedicated to the history of Residential Schools;
- collections of lab specimens and anatomy slides that can be manipulated online from Western University, Ontario;

- videos of chemistry demonstrations and brief lectures available on YouTube from Carleton University, Ontario;
- science and health resources for students, the public, and health professionals from the University of Ottawa, Ontario;
- Ryerson University, Ontario, offers multiple open access videos, documentaries, role-playing games, and learning objects as tools for instructors and students;
- instructional tools for music students to learn theoretical and practical elements of performance from Humber College, Ontario;
- artifacts and documents from the Middle Ages for a course at Memorial University, Newfoundland and Labrador, Canada;
- anatomy videos accessed by using QR codes and mobile phones at the University of Prince Edward Island, Canada;
- a web-based argument visualization tool for science students at Simon Fraser University, British Columbia, Canada;
- Using Talking Circles as part of a course on Aboriginal literature at Memorial University, Newfoundland and Labrador, Canada;
- a portal supporting thesis completion and quality for Information Technology students, with an example of a language learning project from Stockholm University, Sweden;
- teaching and learning resources at University of the Highlands and Islands, Scotland, combining curriculum development and quality improvement in a clearly defined resource development process;
- more than 80 resources, including degree programs, courses and professional development tools, created by the partners at uTOP, the Multi-partner Open University of Technology in France;
- over 34,000 open resources developed by universities and their partners in France with support of the Ministry of Higher Education and Research; and
- a low-cost virtual computer lab for online students at the Norwegian University of Science and Technology, Norway.

Applied Learning: Online resources offer opportunities for practice, self-testing, and supplementary learning, particularly effective for self-assessment, an essential aspect of students taking responsibility for their own learning.

Through online question banks in Accounting at Carleton University, Ontario, students can practice in a safe environment, receive correction and feedback, and target their areas of uncertainty and need. Learning objects, such as those developed at Ontario's Fanshawe College and Durham College or integrated from a commercial supplier at Canadore College, allow students, especially those in apprenticeship programs, to perform tasks that could be risky, expensive, and difficult in real-life situations and that reinforce and extend theoretical learning.

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In examples at Ontario universities, online modules from York University and McMaster University provide support for students in multiple disciplines for essential learning and workplace skills, such as research, communication, group work, time management, note taking, and project management. At Nipissing University, education students are given access to software and technology to be considered for use in their future teaching careers. A project-based learning approach, at Brock University, is combined with online course content and exercises in project management to offer a learning-by-doing challenge.

At the University of British Columbia, Canada, students use a mobile app to locate and identify soil samples in a provincial park.

The Open University of Catalonia in Spain is introducing a new pedagogical design – challenge-based learning – built around case studies and real-life situations, competency development and continuous assessment.

Interaction: Social media and other apps are featured in many course designs in Ontario institutions, from Twitter-based debates on sports ethics at the University of Windsor, to Facebook interactions in a Muslim Studies course between students on two continents at Wilfrid Laurier University, and posting and sharing of favourite articles and visuals related to weekly topics in marketing at Seneca College.

At colleges and universities across the world, students are accessing multiple ways of interacting and sharing learning, whether creating blogs, videos, and visual displays, using Google Maps and Street View, mind mapping software, and podcasts, or communicating on discussion boards and wikis. In this way, resources that best suit any learning preference are available. Students learn about academic uses of apps they are familiar with and about many more learning tools on the web. New ways of engaging with content, professors, and each other demonstrate benefits in motivation and improved grades.

Interdisciplinary Learning: Online resources for interdisciplinary learning are developed at a number of Ontario institutions, for example to engage groups of students across varied programs in the health sciences at the University of Ottawa and Queen's University, and for the wide range of professionals involved in responding to a disaster at Centennial College. Case studies form the basis of these tools, with live, online interaction and subsequent discussions. An interdisciplinary diploma in Applied Aboriginal Studies is available to Aboriginal students at Centennial College, using online and hybrid courses from faculties across the college.

Virtual Reality: Virtual reality allows students to participate in simulated real-life situations in environments that are safe and supportive. Simulations stress interdisciplinary learning, cooperation, careful situational analysis, real-time communication, and other skills best conveyed through experience.

The Pockets of Innovation Series includes examples of applications of virtual reality and simulations for archeology, language, security, social

work, health sciences, veterinary studies, and other courses at Ontario colleges and universities, such as Durham College, Georgian College, Sheridan College, Nipissing University, the Northern Ontario School of Medicine (a shared faculty of Laurentian and Lakehead universities) and Carleton University, which offers both preliminary and more advanced applications of virtual reality. Loyalist College created virtual environments for teaching and learning in border security, food processing and hospital careers, and ecology and health sciences. The Justice Institute of British Columbia, Canada, developed simulations for its Emergency Management Division that are now used in multiple educational settings.

Seeing an opportunity for improvement or a need for change, faculty develop and adopt online design, courses and resources to improve all aspects of teaching and learning.

Ontario Public Colleges and Universities Featured in this Theme

Algoma University
- The Shingwauk Project: Creating a digital archive to preserve the history of Residential Schools for generations of student learning

Algonquin College
- e-Textbooks at Algonquin College: 100% of the students with 100% of their resources 100% of the time

Brock University
- Using Project-Based Learning in an Online Project Management Course at Brock University, Ontario, Canada

Canadore College
- Developing Online Learning Opportunities for Apprentices in the Motive Power Department at Canadore College

Carleton University
- BigBlueButton: Building an open source web conferencing and collaboration platform to support off-campus students

Carleton University
- Carleton Virtual: Using virtual space as an environment for student learning

Carleton University
- Expanding Reality for Learning: Using Carleton Virtual for Language Learning at Carleton University

Carleton University
- Improving Student Success in Financial Accounting with Online Learning at Carleton University

Carleton University
- Online Interaction to Enhance the Learning of First-Year Chemistry Students at Carleton University

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Centennial College
Playing to Learn: A disaster simulation game for interdisciplinary learning at Centennial College

Centennial College
Starting with Pedagogy: New learning management system and an Interdisciplinary Applied Aboriginal Studies Diploma Program for Aboriginal students

Conestoga College
Using Tablets in the Classroom to Enhance Learning in Business Maths Courses at Conestoga College

Durham College
Critical Care Nursing: Province-wide access to learning from a combination of online theory simulation and hands-on experience

Durham College
Linking Online and Experiential Learning: A hybrid model for apprenticeship education through a partnership between Sault College and Durham College

Fanshawe College
Creating Learning Objects: Supporting student learning with online resources at Fanshawe College

George Brown College
Mobile-Assisted Language Learning: Enhancing student learning with mobile phones

Georgian College
Experiential Learning through Simulations in a Second Life Virtual Campus at Georgian College

Humber College
How Do-It-Yourself Technology is Enhancing the Learning Experience for Music Students at Humber College in Toronto, Canada

Lambton College
Supporting Institutional Change: The Learning Innovation Centre at Lambton College

Loyalist College
Border Simulation: Student learning in a virtual world

Loyalist College
Simulations for Learning: Creating a virtual environment for learning

Loyalist College
Virtual Learning Environment: Developments in virtual reality for learning at Loyalist College

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Expanding Literacy: Online resources in information and geospatial literacy for students

Nipissing University
Going Mobile: Developing and supporting mobile learning opportunities for students

Nipissing University
The iTeach Laptop Learning Program: Integrating educational technology into teacher education

Nipissing University
Making Virtual a Reality: Introducing virtual reality learning opportunities for students at Nipissing University

Northern Ontario School of Medicine
Communication and Engagement: Towards a seamless network linking faculty and students of the Northern Ontario School of Medicine

Queen's University
Active Learning: Using online technologies to support new ways of learning for medical students

Ryerson University
Setting the Stage for Student Success: Digital Education Strategies at The G. Raymond Chang School of Continuing Education

Seneca College
Integrating Facebook and Twitter: Helping Students Learn How to Learn Using Social Media at Seneca College

Sheridan College
Building a Dog Skeleton: A simulation-based learning tool for students

University of Ottawa
Interdisciplinary Learning: Creating an online framework to facilitate student learning in multiple disciplines

University of Ottawa
Online Resources for Science and Health: Extending Learning Opportunities at the University of Ottawa

University of Windsor
Assessing the Potential of e-Textbooks at the University of Windsor

University of Windsor
Using Twitter in the Classroom for Student Engagement and Exchange at University of Windsor

Western University
Online Microscopic Anatomy Laboratory Courses – Including Virtual Microscopy Slides at Western University

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Wilfrid Laurier University

Active Learning in an Intercultural Online Environment at Wilfrid Laurier University

York University

SPARK, the Virtual Learning Commons: An online resource for academic literacy at York University

Cross Canada Colleges and Universities Featured in this Theme

Justice Institute of British Columbia

Praxis: An Online Simulation Training Environment for Scenario-Based Real-Time Decision-Making at the Justice Institute of British Columbia, British Columbia

Memorial University, Newfoundland and Labrador

Game of Genders: Using Video and Audio in an Archeology Course at Memorial University of Newfoundland, Canada

Memorial University, Newfoundland and Labrador

The Use of Talking Circles in an Online Course on Aboriginal Literature at Memorial University of Newfoundland

Simon Fraser University, British Columbia

Developing Skills of Argumentation in Undergraduate Science Students Through the Use of an Online Dialectical Map at Simon Fraser University, British Columbia

Université de Sherbrooke, Québec

Using iBook Author and iPads to Manage Content for Pre-Medical Students and Faculty at the Department of Medicine, Université de Sherbrooke, Québec

University of British Columbia

Using an Online Mobile Gaming App for Soil Identification in Undergraduate Courses at the University of British Columbia, British Columbia

University of Prince Edward Island

Using QR Codes and Mobile Phones for Teaching Gross Anatomy at the University of Prince Edward Island

Colleges and Universities from Around the World Featured in this Theme

Athlone Institute of Technology, Ireland

Innovating with Technology for Enhanced Learning at Athlone Institute of Technology, Ireland

Ministry of Higher Education and Research, France

Available to All – One Portal Featuring More than 34,000 Open Educational Resources Developed by Universities in France

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Norwegian University of Science and Technology, Norway

Building a virtual computer lab for online learning at the Norwegian University of Science and Technology and the Research and Development Foundation TISIP

Open University of Catalonia, Spain

Challenge-Based Online Learning to Develop Essential Competencies at the Open University of Catalonia, Barcelona, Spain

Stockholm University, Sweden

Using ICT to Support Thesis Completion, Highlighting the Example of a Thesis Project to Develop a Tool for Online Language Learning for Immigrants, at Stockholm University, Sweden

University of Barcelona, Spain

Providing and Supporting Self-Access Language Learning at the University of Barcelona, Spain

University of the Highlands and Islands, Scotland

Enhancing Student Learning, Curriculum Resources, Staff Development, and Employer Satisfaction in the Educational Development Unit at the University of the Highlands and Islands, Scotland

uTOP, Université de Technologie Ouverte Pluripartenaire, France

uTOP – University Collaboration and Innovation Result in Online Learning Opportunities for Initial and Continuing Education in Engineering and Technology in France

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Theme 2
Diversity in Blended Learning

Blended learning (also called hybrid learning) is offered with different models of design and delivery, with each approach suiting particular student groups and content. Accompanying this overview of the diversity in blended learning are some reflections from faculty on pedagogy, structure and strategies which emerge from their experiences and those of their students,

Flipped Classroom: In the widely used flipped classroom model, online modules feature what is often the core content of the course through readings, practice exercises, self-assessment quizzes, videos, discussion boards, images, and a multitude of other resources. Students work with these resources before class, thereby arriving informed and ready to participate. In the face-to-face portion, students interact with the professor and/or in group tutorials headed by teaching assistants, focused on problem-solving, field trips, practical exercises, and discussions – whatever forms of participatory learning best suit the course.

This model is used at many Ontario colleges and universities, including Cambrian College for a Public Relations course, Lambton College in Physical Anthropology, in Introductory Psychology at McMaster University, at Wilfrid Laurier University in Organic Chemistry, and at the University of Ottawa in Science Fiction, as well as courses in Calculus, Sociology, Classics, and Psychology from Queen's University. The flipped classroom, often used in large-enrolment and first-year courses, offers students the possibility of developing content expertise in their own time and pace, while the classroom highlights engagement and exchange rather than lengthy lectures.

Delivery Alternatives: In some blended courses, professors combine weeks of face-to-face classes with other weeks provided completely online, such as in the Human Services program at Mohawk College, in Ontario. In language/communications courses taken by all students at Mohawk College, the blend of face-to-face and online delivery is modified to meet the needs of each program and its students.

At Ontario's Durham College and Niagara College, professors include three formats with students progressing over the weeks of a course from face-to-face classes, to blended delivery, to fully online learning. Students become familiar with the technologies and strategies for learning online, while also having the opportunity to build community in the face-to-face classroom. Canadore College has courses for apprentices, with online learning offered to students in the workplace combined with on-campus practical sessions.

Students at Wilfrid Laurier University, Ontario, study how to teach vocal and instrumental music primarily online, with plentiful provision for engagement and feedback, supplemented by face-to-face workshops.

Blogs and posters are used for student exchange and reports on their research topics in a course in children's health at the University of Prince Edward Island, Canada. Agile design at l'Université du Québec à Trois-Rivières in Québec, Canada supports integration of the latest technologies with achievement of pedagogical goals. A blended course in Babylonian Culture at Università Ca' Foscari in Italy offers students online practice in cuneiform writing, leading to increased engagement and skill development.

Offering Complete Programs: In a model used in Ontario health science programs at Lakehead University and apprenticeships at Durham College and Sault College, all course content for the completion of a degree, diploma, or certificate is delivered online, followed by, or integrated with, face-to-face practical experience in shops, labs, and clinical placements. The online content for a complete program may be developed by one college or university or jointly developed and shared among many institutions with the result that students can complete a program online with courses from a variety of institutions and attend face-to-face sessions in their communities.

Nipissing University offers a degree completion option for students with three-year business diplomas from colleges through blended learning partnerships with six Ontario colleges. The availability of blended programs has greatly extended access to post-secondary education in northern and Aboriginal communities, as shown in experience like those at Ontario's Lakehead University.

Faculty Perceptions and Experiences: The professors, whose experiences are featured in the Pockets of Innovation Series, offer a number of perceptions and principles regarding blended learning:

- Course development often begins with an examination of course content to determine what can best be taught online and what is more suitable for face-to-face teaching and learning. Guiding this is a shift in pedagogical thinking that emphasizes the importance of student involvement, both online and in-class, for optimal learning. One consequence is a change in approach to classroom teaching, from delivery of content to engagement, which impacts not only blended learning classes but also faculty approaches to teaching overall.
- Collaboration with centres for learning and teaching at colleges and universities is beneficial in understanding the new approaches to teaching and learning and the capacities, contributions, and challenges of technologies. Development of all models of online learning requires considerable time and creative commitment.
- Students appreciate the opportunity to prepare for and engage in classes rather than listen to long, one-time-only lectures. Blended learning modules allow self-paced learning, with content available for review and for targeted studying on points of difficulty. Students often arrive at class eager to apply what they learned to real-life case studies and problem-solving.

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- Blended learning also requires dedication and discipline on the part of students as core content is no longer delivered in lectures. One professor calls this “the double-edged sword of self-paced learning”. Many faculty encounter difficulties convincing students that the online portion of a blended course is core, essential content rather than optional. Weekly online quizzes for marks, online group and individual projects, time limited access to modules, and other strategies are adopted to encourage continuous participation.

Blended learning complements the trend in post-secondary sector to more active, engaged, and experiential learning, while also extending access by making learning more flexible and individually-paced. Research in many institutions demonstrates an increase in student grades in blended learning courses, with results higher than those from face-to-face delivery and online learning.

Ontario Public Colleges and Universities Featured in this Theme

Cambrian College
Student Choice: Offering Multiple Course Design Options for Better Access and Learning at Cambrian College

Canadore College
Developing Online Learning Opportunities for Apprentices in the Motive Power Department at Canadore College

Durham College
Combining Traditional, Hybrid, and Online Learning in a Progressive Delivery Model at Durham College

Durham College
Linking Online and Experiential Learning A hybrid model for apprenticeship education through a partnership between Sault College and Durham College

Lakehead University
Aboriginal Education: Offering an honours degree program focused on becoming a teacher with the specialization of teaching students of Aboriginal ancestry at Lakehead University

Lakehead University
From Access to Graduate Programs: An extensive array of learning opportunities for nursing and health science students

Lambton College
Converting to Hybrid Teaching – Realizing the benefits of blended courses for teaching and learning at Lambton College

Mohawk College
Blended Learning for Students in Health Sciences and Human Services at Mohawk College

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Mohawk College
Implementing Blended Learning in Language Studies at Mohawk College

McMaster University
Blended Learning in Introductory Psychology: An IntroPsych blended learning model

Niagara College
Commitment to Students and Excellence: Developing self-directed learners through iLearn at Niagara College

Nipissing University
Nipissing College Partnership Plan: Nipissing University's School of Business Partners with Colleges to Deliver a Business Degree Option

Queen's University
Designing First-Year Sociology for the Millennial Generation at Queen's University

Queen's University
Developing a Blended Learning Course for More Engaged Learning in Calculus at Queen's University

Queen's University
Engaging First-Year Students: A Blended Learning Model for Active Learning

Queen's University
Strategic Advancement: Moving Ahead with Blended Learning at Queen's University;

Queen's University
Teaching and Learning in a Course in Ancient Humour using a Blended Format at Queen's University;

Sault College
Linking Online and Experiential Learning: A hybrid model for apprenticeship education through a partnership between Sault College and Durham College

University of Ottawa
A Science Fiction Course Makes Hybrid Learning Anything but Futuristic at the University of Ottawa in Ottawa, Canada

Wilfrid Laurier University
A Blended Course at Wilfrid Laurier University in Waterloo, Canada, Teaches Students How to Teach Music

Wilfrid Laurier University
Encouraging Student Independence: A blended learning model for Organic Chemistry at Wilfrid Laurier University

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Cross Canada Colleges and Universities Featured in this Theme

Université du Québec à Trois-Rivières, Québec

Agile Design in a Course on the Integration of Technology in Teaching at l'Université du Québec à Trois-Rivières

University of Prince Edward Island

The Use of Blogs and Virtual Posters in a Hybrid Course on Issues in Children's Health and Development at the University of Prince Edward Island

Colleges and Universities from Around the World Featured in this Theme

Università Ca' Foscari, Italy

Blending Ancient and Modern: Using MOOCs and Blended Learning to Teach Babylonian Cuneiform Writing at the Università Ca' Foscari in Italy

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Theme 3
Student Access, Engagement and Flexibility

In online learning, new pedagogies focus on student-centered learning with increased options for access to learning, use of resources, interaction and engagement, styles of teaching and learning, with enhanced opportunities to learn about content and technologies and for access to experts and students in other locations.

This summary focuses on the creative designs for online learning featured in the Pockets of Innovation Series exemplifying each of these concepts.

Multiple Formats: In an approach found particularly in examples from public colleges in northern Ontario, courses are offered in multiple formats, often allowing the students to choose how they attend each class. The availability of the lectures and resource material online means time for learning and chosen delivery method are flexible to better suit student schedules.

Among the wide options of formats made available through varied delivery models from Cambrian College, Canadore College, Collège Boréal, Confederation College, Northern College and Sault College are:

- Online programs and courses developed at each college for students at home, in synchronous formats;
- Online programs and courses developed at each college for students at home, in asynchronous formats;
- Synchronous web conferencing, videoconferencing and/or audioconferencing available through Contact North | Contact Nord's 116 online learning centres;
- Access to recorded lectures for the students to view online at their convenience;
- Blended courses combining online content from another college and on-campus active learning;
- Courses from other colleges assessed for equivalency and taken online for program credit;
- DVDs provided for students in areas with limited bandwidth;
- Courses offered online synchronously and asynchronously which are also available in face-to-face classes; and
- Students able to choose which format to use on a rotating basis to suit their weekly schedules, alternating between in-class attendance and synchronous and asynchronous participation in virtual classrooms.

Dalhousie University in Nova Scotia, Canada offers its large enrollment anatomy course online, with lectures, demonstrations and exercises, supplemented by the option of attending the live class lectures. In New

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Brunswick, Canada, Yorkville University set up online supports and supervision for students during extensive practicum in their degree programs. Business Administration students at Laval University in Québec, Canada can choose between attending live lectures or viewing the classes, either synchronously or in their own time, supplemented with online activities.

At the University of the Highlands and Islands in Scotland, programs are in the format that best suits the content and students, ranging from local programs, to learning in the field, multiple campus and off-campus offerings, all supported through technology.

Online Programs: The Pockets of Innovation Series highlights a number of complete degree programs available online, particularly in health sciences and education.

Graduate degrees available online through Ontario universities include the interdisciplinary Master of Health Management from McMaster University, and the problem-based, synchronous Master's degree in Education and Digital Technologies at the University of Ontario Institute of Technology. The University of Ottawa provides courses to and uses partner courses from a national online consortium offering French-language professional development programs in health.

In Ontario, collaboration between Northern College and Queen's University in Ontario offers college mining technician graduates an opportunity to complete a mining degree program. Lakehead University offers complete online programs in nursing, gerontology studies, and a Master's in Public Health, while Nipissing University works with partners across Ontario so students in the online Bachelor of Science in Nursing can complete the practicum in their own communities. These online programs are of particular benefit to students in northern and Aboriginal communities.

Interaction and Engagement: The lack of direct contact is often cited as a limitation of online learning: to address this challenge, faculty and instructors in Ontario design diverse ways to ensure students connect with each other, the professor, and the content.

Examples from Ontario colleges include a course in art history at Durham College, which not only facilitates student interaction in assignments and projects, but also stresses the creation of a social presence by each student and a design that fosters interaction with the content. In a Durham College course in Women's Studies, connections to the lives of the students and the material they previously studied guide the content, its presentation, and related activities. At Cambrian College, eDome serves as a facility for delivery of all formats of distance education that link together students from multiple communities, as well as a production centre for sophisticated educational resources.

A course in Quebec history at Carleton University in Ontario concludes with an online debate that draws together all the key themes, and offers

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students experience in presenting and referencing points of view. In a graduate education course at Ontario's Western University, the focus is on making connections with people, content, new ideas, and the technology through collaborative learning, student development of content, professor as co-learner, and peer assessment. Many other courses integrate blogs, discussion groups, group assignments, break-out rooms, and other strategies for student cooperation and collaboration.

The library at the Open University, U.K. works to engage students through panels, social media, events and seminars, as well as embedding the principles of accessibility in all their services.

New Formats: Canadian universities offer examples of using new formats to enhance students access and flexibility. Videos of specimens and models created on an iPhone for an anatomy class at the University of Prince Edward Island allow students to study and review as a supplement to lab-based learning. At Université de Sherbrooke, Québec, iPads are used extensively by professors in the Department of Medicine to provide students with course notes, images, audio and video materials. Science students at Simon Fraser University in British Columbia have access to a specially designed dialectical map to help students state and sharpen their points of views on controversial questions. The Justice Institute of British Columbia uses a tool it designed to provide realistic training simulations for emergency management personal; the tool is now widely used in multiple professions.

A MOOC developed at the Norwegian University of Science and Technology offers students flexibility in start and exams dates, as well as the possibility of taking the course for credit after the successful completion of two modules. The Technical University of Denmark set up an online alternative to its face-to-face program that qualifies students with technical training and experience to apply for engineering degrees.

Synchronous Teaching and Learning: At Ontario public colleges and universities, such as the University of Ontario Institute of Technology, professors take advantage of the immediacy and connections of synchronous online learning, integrating lectures, videos, break-out groups, class presentations, polls, discussions, and sharing of documents and resources in real-time. Immersive telepresence at Lakehead University allow interaction and exchange among students in classrooms on two campuses and remote learners.

At Western University, students choose between an online, synchronous or in-class course in Human Anatomy, accompanied by an online lab using a virtual 3D slide set. Students in the Literacy and Basic Skills Program at Confederation College take courses from home or local Contact North | Contact Nord online learning centres, working online at their own pace in full-time day-time or part-time evening classes. The instructors are online for the same hours as the students to offer support and answer questions.

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Building Knowledge and Community: Online learning often involves students in the role of teacher as well as learner, with the professor becoming a guide and participant in the process.

In Ontario, online courses in medical studies at the University of Toronto are structured so the students work together to build knowledge through collaboration, using case studies, knowledge sharing and problem-solving. A course in Chinese language, also at the University of Toronto, engages students in assessing which apps are most effective for language learning and practice. A design course at George Brown College uses the concept of student-created content to assess the latest design apps. At Brock University, a community of practice is established so facilitators of the online adult education courses can share experiences, perspectives, and teaching and learning strategies to improve their students' performance. The establishment of a community of learners is core to student participation, with an emphasis on discussion boards and peer evaluation, in graduate education courses at Nipissing University.

The Centre for Technology, Education and Culture in Israel uses a special design it created that brings together different cultural groups in small groups for online learning in education. A graduate education degree program at the University of Florida, USA, stresses the creation of online faculty, social, cognitive, and learner presence in a Community of Inquiry framework. Kristiania University College in Norway encourages collaboration and support among students in asynchronous courses with continuous entry through discussion groups, online introductions and encouraging exchange and peer review of assignments.

Social Media: Some online course designs feature social media as both content and vehicle for the learning. At Durham College, a course in the use of social media for communication, collaboration, and education is adapted to fit into numerous programs. The learning and assignments are built around applications of various apps, applicable to each program field. In digital media courses at Queen's University, social media is used to encourage student participation, develop digital literacy, support collaborative and self-directed learning, and form the basis of the content and assignments. Marketing courses at Seneca College and Sports Ethics at the University of Windsor use Facebook, Twitter, and other apps for student interaction and content sharing. The Library at the University of Toronto Mississauga links with students through social media for information, feedback, and tutorials.

Online learning is firmly integrated in colleges and universities, offering students greater access, flexibility, participation in teaching and learning, and experiences not possible in a face-to-face classroom. Faculty adapt their thinking about how to teach, making creative use of the opportunities online learning provides.

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Brock University
- Facilitator Community of Practice: An online communications and information environment for facilitators of adult education programs

Cambrian College
- eDome: A high-end facility for the production and delivery of enhanced online learning opportunities for students

Cambrian College
- Student Choice: Offering Multiple Course Design Options for Better Access and Learning at Cambrian College

Canadore College
- Expanding Flexible Access in the School of Sports and Recreation at Canadore College

Carleton University
- Increasing Student Enrolment, Retention, and Participation through Online Delivery of an Introduction to Québec Society Course at Carleton University

Collège Boréal
- Matching Pedagogy and Technology: Providing student choice for effective learning at Collège Boréal

Confederation College
- Reaching Out: Delivery options that provide anywhere, any time learning opportunities for students at Confederation College

Confederation College
- Synchronous, Interactive, and Individual - Online learning opportunities for adults at Confederation College

Durham College
- Designing Online Courses with Visual Stimulation to Enhance Student Engagement at Durham College

Durham College
- Developing Online Courses that Connect to Students' Lives at Durham College

Durham College
- Social Media and Society: Using social media for student learning about social media at Durham College

George Brown College
- Student-Generated Course Content: A student-centred pedagogical model for teaching and learning

Lakehead University
- From Access to Graduate Programs: An extensive array of learning opportunities for nursing and health science students

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Lakehead University
Using Immersive Telepresence Classrooms to Link Students on Two Campuses and throughout the Region at Lakehead University

McMaster University
Master of Health Management: Flexible learning for health care professionals

Nipissing University
Community of Learners: Supporting and assessing online communications with Faculty of Education graduate students at Nipissing University

Nipissing University
Providing Access and Flexibility: Innovative learning opportunities for nursing students at Nipissing University

Northern College
A Collaboration Between Northern College in Haileybury, Canada and Queen's University in Kingston, Canada Creates an Online Degree Program in Mining Engineering Technology

Northern College
Flexibility in the Design and Delivery of the Mining Engineering Technician Program at Northern College

Queen's University
A Collaboration Between Northern College in Haileybury, Canada and Queen's University in Kingston, Canada Creates an Online Degree Program in Mining Engineering Technology

Queen's University
Connected Teaching and Learning: Using online delivery and social media for more engaged and effective learning

Sault College
Offering alternatives - Enhancing student learning through flexible course delivery at Sault College

Seneca College
Integrating Facebook and Twitter: Helping Students Learn How to Learn Using Social Media at Seneca College

University of Ontario Institute of Technology
Developing Autonomous Learners: Degree programs in education and digital technologies

University of Ontario Institute of Technology
Graduate Degrees through Synchronous Online Learning at the University of Ontario Institute of Technology

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University of Ottawa
Professional Development: Developing Online Resources for Health Professionals

University of Toronto
Choosing the Most Effective Tools for Technology-Enhanced Teaching and Learning in Chinese Language Courses at the University of Toronto Mississauga, Canada

University of Toronto
Engaging with Students through Social Media: The University of Toronto Mississauga Library Integrates New Ways of Communicating

University of Toronto
Knowledge Building: Using online environments for case-based learning in the health sciences

University of Windsor
Using Twitter in the Classroom for Student Engagement and Exchange at University of Windsor

Western University
Online Microscopic Anatomy Laboratory Courses – Including Virtual Microscopy Slides – at Western University

Western University
Teaching in a Virtual World: Students connecting as online teachers and learners in the Faculty of Education at Western University

Cross Canada Colleges and Universities Featured in this Theme

Dalhousie University, Nova Scotia
Teaching an Online Large Enrolment Course in Anatomy at Dalhousie University, Nova Scotia, Canada

Justice Institute of British Columbia
Praxis: An Online Simulation Training Environment for Scenario-Based Real-Time Decision-Making at the Justice Institute of British Columbia, British Columbia

Laval University, Québec
L'Enseignement Comodal: Dual Mode Teaching in Business Administration at Laval University, Québec

Simon Fraser University, British Columbia
Developing Skills of Argumentation in Undergraduate Science Students Through the Use of an Online Dialectical Map at Simon Fraser University, British Columbia

Université de Sherbrooke, Québec
Using iBook Author and iPads to Manage Content for Pre-Medical Students and Faculty at the Department of Medicine, Université de Sherbrooke, Québec

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University of Prince Edward Island
- Using QR Codes and Mobile Phones for Teaching Gross Anatomy at the University of Prince Edward Island

Yorkville University, New Brunswick
- Developing Practica for an Online Masters of Arts in Counselling Psychology at Yorkville University, New Brunswick

Colleges and Universities from Around the World Featured in this Theme

Centre for Technology, Education and Cultural Diversity, Israel
- Multicultural Collaborative Online Learning and Teaching Designed and Implemented by the Centre for Technology, Education and Cultural Diversity in Israel

Kristiania University College, Norway
- Innovations in Student Interaction, Support, and Evaluation at Kristiania University College in Norway

Norwegian University of Science and Technology, Norway
- Creating a MOOC that Emphasizes Flexibility for Students at the Norwegian University of Science and Technology, Norway

Open University, UK
- Digital by Design: Library Services at the Open University, United Kingdom

Technical University of Denmark
- An Online Admissions Program Expands Access to Engineering Degrees at Technical University of Denmark

University of Florida, USA
- Creating Presence in an Online Doctoral Program at the University of Florida

University of the Highlands and Islands, Scotland
- Enhancing Student Learning, Curriculum Resources, Staff Development, and Employer Satisfaction in the Educational Development Unit at the University of the Highlands and Islands, Scotland

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Theme 4
Supporting Student Success Online

Learning how to use technology effectively

Learning how to be a successful student

Supplementary Learning

Linking to Outside Sources

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Theme 4
Supporting Student Success Online

Student achievement is facilitated not only through the provision of quality online programs and courses, but also by delivering a wide range of online services supporting development of academic and personal skills essential for post-secondary success. Students require resources beyond those offered in course content to be effective learners. The development of these tools is undertaken by faculty and instructors, as well as staff in centres for teaching and learning, libraries, and student support centres.

The resources developed in Ontario and around the world for online student support differ in content, approach, and complexity, but they all address needs for support as independent and successful learners.

Learning how to use technology effectively: Developers recognize that not all students are so-called digital natives, and some require assistance with adopting technologies, especially for academic purposes. To respond to this, resources from short videos to full modules demonstrate how to access key services such as registration, financial aid, e-mail and other communication systems, as well as how to maneuver through the learning management system (LMS) and course materials. Resources available at Algonquin College and Sir Sandford Fleming College provide examples of these services for students. Participation in discussion boards, online test-taking and assignment delivery, and the use of search engines and various media sources are now essential skills and practical online tools guide students through their effective use. Just-in-time resources provide guidance, with infinite patience, for those uncomfortable or unfamiliar with technology.

Ryerson University offers a Digital Media Zone that provides students with support in developing digital and business skills by supporting start-up ideas.

Learning how to be a successful student: Examples from Ontario colleges and universities illustrate resources to help students with skills for successful learning, such as research, writing, presentation development, time management, note-taking, and studying. Niagara College provides a full course, offered for credit, to help students develop these skills. Students in Literacy and Basic Skills Programs at Confederation College, offered online in synchronous format, work through resources and exercises on an individual basis, aided by the constant online presence of instructors for support, clarification, and problem-solving. Individual counselling and program pathways, such as those offered at Northern College, support online learning success. At Cambrian College, online tutoring supplements the face-to-face service, extending the availability of the support to evenings and weekends, serving students at home. Northern College provides anywhere, anytime online tutoring from a live, online tutor.

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More examples from Ontario institutions include engineering programs at Queen's University in which essential learning and information literacy skills are integrated into the design of courses. At McMaster University, modules address both information and geospatial literacy. Rather than taking part in a one-time, face-to-face presentation on the topic, students have access to extensive sources they can consult at their own time and pace to address learning challenges. Course rubrics that clearly state and exemplify expectations, such as those used at Nipissing University, offer guidance and points of reference to improve student performance and confidence.

Many of these tools are accessible to all students being openly available on Ontario public college and university websites, including the University of Ontario Institute of Technology and York University. They may also be organized for multiple uses, by students working on their own, students working with staff in the student centre, or for faculty to integrate into course content or assignments. For some specific applications, including for students preparing for or participating in co-op placements at the University of Waterloo and the University of Ottawa, resources also focus on workplace readiness and skills, such as project management and collaboration.

Faculty and instructors offer online office hours, such as through the use of Skype at Algoma University, often in the evening so instructors can work through problems with students while they are studying rather than waiting until the next class. As an additional tool, frequently asked questions are put into a database, with their answers, for all students to consult, providing another source of immediate support.

The National Distance Education University in Spain offers a program of supports and adaptations for disabled learners, as well as a detailed process that stresses cross-institutional cooperation and consultation with each student. An open resource Student Tool Box from Dublin City University, Ireland offers resources and key questions to guide adults deciding on and starting post-secondary education.

Supplementary Learning: Innovative responses to the need for supplementary learning address the common challenges of students arriving from secondary school unprepared for the content demands of first-year mathematics, chemistry, and other subjects, in addition to supporting students at all levels who need additional practice and support throughout their courses. Examples of these tools are available for accounting students at Carleton University, in calculus at Queen's University, and in mathematics at Wilfrid Laurier University.

The modules provide not only questions and answers, but also analysis of individual errors and links to question banks providing additional practice in areas of weakness. Research conducted on the success of students who work through these supplementary tools demonstrates significant improvements in grades.

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Language learning also features widely used supplementary learning tools. Mobile language learning is effective and popular with English-as-an-additional-language students, often involving exercises that send them out into their communities to talk with residents to get necessary information. George Brown College in Ontario uses this approach in its blended learning language courses. Ontario's University of Ottawa and Carleton University provide online support in vocabulary, speaking, listening and writing for Francophone and French as a Second Language students. These resources can be integrated for class use or serve as tools for self-directed learning. At the University of Barcelona in Spain, students have access to modules from a private company for language learning, to be used for learning outside of their registered courses.

Linking to Outside Sources: Faculty and instructors often provide online links to materials from a much wider variety of sources than would be accessible in a classroom or within required readings, thereby expanding not only points of view but also styles of presentation. The supplementary use of YouTube videos, materials provided by publishers, sections of Massive Open Online Courses (MOOCs), photographs, and original archives allows students who prefer visual, sequential, or other approaches to learning to find what best suits their learning needs. The Open University of Catalonia in Spain has developed an online course template that links to both internal and external resources, offering students guidance on how long each resource requires for effective learning, as well as which core competencies it aids in developing.

The key points the educators make about the importance of online provision of student support services are that the resources and services must be accessible when and where the students need them – the just-in-time factor – and they must accommodate the pace, repetition, choice of emphasis, and preferred learning approach each student adopts for optimum learning.

Ontario Public Colleges and Universities Featured in This Theme

Algoma University
- Moving to Digital: Introducing online resources for student learning and research

Algonquin College
- Moving Ahead with the Digital College: Mobile learning, open educational resources, and online and hybrid learning at Algonquin College

Cambrian College
- Reaching Out to Students at Home: Online Tutoring at Cambrian College

Confederation College
- Synchronous, Interactive, and Individual - Online learning opportunities for adults at Confederation College

Carleton University
Improving Student Success in Financial Accounting with Online Learning at Carleton University

Carleton University
VidéoTech: Creating and sharing online learning materials for French-as-a-second-language students by Carleton University and the University of Ottawa

George Brown College
Blended Courses for Practical Language Learning at George Brown College

McMaster University
Expanding Literacy: Online resources in information and geospatial literacy for students

Niagara College
Commitment to Students and Excellence: Developing self-directed learners through iLearn at Niagara College

Nipissing University
Community of Learners: Supporting and assessing online communications with Faculty of Education graduate students at Nipissing University

Northern College
Mining technician at Northern: Flexibility in the Design and Delivery of the Mining Engineering Technician Program at Northern College

Northern College
Online Design and Development Focused on Student Access and Learning at Northern College

Queen's University
Developing a Blended Learning Course for More Engaged Learning in Calculus at Queen's University

Queen's University
Integrating Information Literacy into Course Design and Delivery: Engineering students learn about information search and management as a part of professional engineering skills

Ryerson University
Digital Media Zone: An incubator for business development and learning for digital entrepreneurs

Sir Sandford Fleming College
Before, During, and After Class: Online resources for students and faculty

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University of Ontario Institute of Technology
nool.ca: Providing support via the web for math and writing skills for first-year students

University of Ottawa
Beyond the Classroom: Providing student support services through online resources for learning

University of Waterloo
Skills for the Workplace: Professional development for co-op students on work placement at the University of Waterloo

Wilfrid Laurier University
Mathematics Online – The Supplementary Module Program for Calculus at Wilfrid Laurier University

York University
SPARK, the Virtual Learning Commons: An online resource for academic literacy at York University

Colleges and Universities from Around the World Featured in this Theme

Dublin City University, Ireland
Dublin City University Leads the Development of a Student Success Toolbox for Adults Considering Post-Secondary Education

National Distance Education University, Spain
Supporting Success for Students with Disabilities at the National Distance Education University (UNED) in Spain

Open University of Catalonia, Spain
Challenge-Based Online Learning to Develop Essential Competencies at the Open University of Catalonia, Barcelona, Spain

University of Barcelona, Spain
Providing and Supporting Self-Access Language Learning at the University of Barcelona, Spain

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Theme 5
OER and MOOCs

MOOCs for Open Learning

Dual Purpose MOOCs

Integrating MOOCs

Open Educational Resources

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Theme 5
OER and MOOCs

For the past few years, Open Educational Resources (OER) and, especially, Massive Open Online Courses (MOOCs) have attracted academic and media attention. Both are part of an 'open education' movement that offers students and faculty access to free resources for integration into courses and supplementary learning, as well as self-directed, interest-based learning.

While much of the initial excitement about the potential of MOOCs to radically modify higher education has dissipated, educators are developing MOOCs to reach and serve new student groups, blend credit and non-credit learning and raise their institutional profile. MOOCs are being re-designed, often with the modification of the "massive" component, to serve smaller, more specialized educational purposes.

OER include a multitude of resources from taped lectures to high-end simulations and games with the defining characteristic that they can be freely adopted and adapted, with appropriate credit, for learning anywhere in the world, whether by faculty or individual students.

MOOCs for Open Learning: As a way of reaching new students and expanding their profiles, many institutions experimented with MOOCs. At Fanshawe College in Ontario, a MOOC on the societal and practical aspects of sustainability offers four levels of achievement, depending on the student level of involvement and commitment.

As an early member of the MOOC consortium Coursera, the University of Toronto in Ontario developed five MOOCs in a variety of disciplines to assess designs, registrations, time commitments and multiple other factors.

At l'Université du Québec à Trois-Rivières in Québec, Canada, a French-language MOOC on personal finance drew in registrants from 20 countries, while one on play for early childhood education has in participants with both personal and professional interest in the topic.

A MOOC on the ancient cuneiform system of writing is offered at Università Ca' Foscari in Italy to provide prospective students with an introduction to the field and for the general public to learn about and create the symbols they see in museums. Dublin City University in Ireland offers MOOCs with topics related to Ireland, including language, literature, history, music and conflict resolution. The Irish language MOOC emphasizes active learning.

MOOCs at the University of Geneva in Switzerland integrate Massive Open Online Research Projects is such fields as astronomy and literature to provide real-life research experiences to participants.

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Dual Purpose MOOCs: Several institutions offer MOOCS as a free resource to the general public, while offering students the option to register and complete assignments for credit. At Cape Breton University in Canada, a dual-purpose MOOC addresses recommendation from the Truth and Reconciliation Commission on the need for more education for and about Aboriginal peoples and their cultures. The public participate in a face-to-face classroom streamed internationally and interact through social media.

The Business School at Karlstads University in Sweden works with the Service Research Centre on a series of MOOCs available as credit and non-credit offerings, featuring videos and other resources integrated as OER. The focus is on applying the learning to each participant's workplace. Students in a MOOC for secondary school teachers from the Norwegian University of Science and Technology are offered the option of registering for credit after completion of the first three modules.

Integrating MOOCs: In the Faculty of Education at the University of Iceland, students, as one of their course assignments, chose a topic-related MOOC to analyze for structure, support and pedagogical approach, as well as content.

Open Educational Resources: At l'Université de Montréal in Canada, a tool for designing online scenarios has been created and made freely available to guide faculty and design staff in the preparation of scenarios, focusing on active pedagogical approaches and the selective use of information and communications technologies.

In France, funding from the Ministry of Higher Education and Research supports eight digital thematic universities, composed of existing institutions and organizations, which have created over 34,000 OER, including MOOCs, available on a single portal in multiple languages.

The University of the Highlands and Islands in Scotland offers, in partnership with American and New Zealand partners, an open resource six-course Higher Education Certificate Program in Business as an OER, available through OERu. Students can choose to pay for assessment, making them eligible for a Certificate from the University.

Ontario Public Colleges and Universities Featured in This Theme

Fanshawe College

- Designing and Offering a Massive Open Online Course (MOOC) at Fanshawe College

University of Toronto

- Massive Open Online Courses (MOOCs) – The First Steps at the University of Toronto

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Cross Canada Colleges and Universities Featured in this Theme

Cape Breton University, Nova Scotia
- Using Open Education at Cape Breton University, Nova Scotia, Canada, to Engage with The Truth and Reconciliation Commission's Call to Support Healing, Dialogue, and Learning for First Nations

Université de Montréal
- A Web-Based Expert System for Designing Instructional Scenarios from Université de Montréal, Québec

Université du Québec à Trois-Rivières
- Francophone MOOCs with High Completion Rates from the Université du Québec à Trois-Rivières

Colleges and Universities from Around the World Featured in this Theme

Dublin City University, Ireland
- Designing, Implementing and Evaluating Contemporary Models of Teaching and Learning at the National Institute for Digital Learning at Dublin City University, Ireland

Karlstads University, Sweden
- Developing Hybrid MOOCs to Serve Diverse Learners at Karlstads University, Sweden

Ministry of Higher Education and Research, France
- Available to All – One Portal Featuring More than 34,000 Open Educational Resources Developed by Universities in France

Norwegian University of Science and Technology, Norway
- Creating a MOOC that Emphasizes Flexibility for Students at the Norwegian University of Science and Technology, Norway

Università Ca' Foscari, Italy
- Blending Ancient and Modern: Using MOOCs and Blended Learning to Teach Babylonian Cuneiform Writing at the Università Ca' Foscari in Italy

University of Geneva, Switzerland
- Integrating Massive Open Online Research Exercises into MOOCs to Benefit Students and Researchers at the University of Geneva, Switzerland

University of Iceland
- Integrating MOOCs into Credit Courses at the University of Iceland

University of the Highlands and Islands, Scotland
- Creating Policies and Initiatives at a University with 13 Partner Institutions: Academic Development at the University of the Highlands and Islands, Scotland

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Theme 6
Options for Online Assessment

Timeliness

Extending Access

Encouraging Mastery Learning

Encouraging Participation

Peer Assessment

Fostering Skill Development

Highlighting Achievements

Faculty Benefits

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Theme 6
Options for Online Assessment

In the new pedagogy of online learning, assessment has been expanded beyond papers, tests, and final exams that evaluate learning. Online assessment has become a critical learning tool that:

- Provides timely and detailed feedback;
- Targets learning to each student's area of need;
- Facilitates peer assessment; and
- Encourages the development of new skills.

This summary highlights the creative approaches to online assessment and evaluation for enhanced learning and improved student grades presented in the Pockets of Innovation Series.

Timeliness: One factor students most appreciate about online marking, as shown at Ontario universities and colleges such as the University of Ottawa and University of Waterloo, is the fast turn-around time, often as short as 24 hours. Assignments with individually-assessed essays and short answers, as well as those with machine-marked multiple-choice questions, are returned more quickly. At the Canadian Food and Wine Institute at Niagara College, a commercial product is used to take photographs and videos of student work and faculty provide personalized feedback in real time.

Professors prepare rubrics and comments that address common errors and issues, an approach used at the Ontario College of Art and Design University, and supplement these with individualized feedback for specific points. Students appreciate being able to incorporate the results of one assignment into preparing the next. Software developed at the University of Toronto organizes marking by large numbers of geographically-scattered markers, allowing quick turn-around of thousands of exams.

A research project headed by Dublin City University in Ireland look at using analytics of participation rates to determine and reach out to struggling students; a second project assessed the impact of online feedback on first-year student success.

Extending Access: Northern College offers a system of online proctoring that allows students in remote locations to complete monitored exams in their communities. To limit time for the consultation of resources, institutions allow limited, timed access to exams, so they can be completed online rather than requiring attendance at institutional exam centres. At the University of Ottawa, technologies to support exam-taking by students with disabilities are tested.

Encouraging Mastery Learning: Online tools that allow students to assess, improve, and re-assess their own learning are particularly effective in improving test results and final grades. Pre-tests reveal areas of weaknesses, accompanied by modules with instruction, demonstrations, and extensive banks of practice questions and explained answers. Students can repeat and re-test until achieving the necessary mastery.

Ontario colleges and universities offer examples of online support for mastery learning. For graded tests in Accounting at Carleton University, students can repeat the tests, responding to randomly generated questions and receiving feedback on their attempts, with the machine choosing the best results to submit for final grades. At Carleton University, the resources used for mastery learning in Chemistry are available from a publisher; the modules for Mathematics at Wilfrid Laurier University are created in-house. At Durham College, online worksheets offer practice as preparation for tests in Criminology.

Students at Kristiania University College in Norway can take practice tests, receiving feedback and examples of good answers so they can modify their responses. Student schedule their own exams in an open entry system.

Encouraging Participation: Online assessment often includes weekly tests that allow students to steadily accumulate marks throughout a course, encouraging ongoing participation and learning. A Massage Therapy program at Ontario's Lambton College uses quizzes that are worth only a few marks each, but are also carefully timed to discourage reliance on the textbook. Results from short quizzes are used for purposes other than grades, such as determining the rate of student progress through online modules and pointing out areas for more attention. In a blended learning course in Organic Chemistry at Wilfrid Laurier University in Ontario, quizzes at the end of online sections that precede in-class lectures give professors a sense of topics needing additional explanation or examples and prepare students for more active involvement in the face-to-face sessions.

Peer Assessment: Many courses incorporate online peer assessment, in which students comment on each other's papers according to clearly defined criteria. The student markers get the experience of assessing and providing useful and constructive comments on another student's work, as well as seeing alternative approaches to a topic they also addressed. The student writers benefit from the feedback they receive and the opportunity to revise their papers. In Ontario, the University of Guelph and the University of Toronto both use tools they developed for peer assessment. As a part of each small group exercise at the School of Business at Simon Fraser University in British Columbia, Canada, students assess their group members on online teamwork dimensions such as preparation, contribution and collaboration.

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Fostering Skill Development: Contributions to online discussion boards, blogs and group projects are often part of the marking matrix, with students expected to offer substantive comments on issues and each other's posts. As well as adding to subject knowledge, this form of assessment is effective in fostering the development of broader skills, as shown in experience at George Brown College and Trent University in Ontario, such as concise writing, clear communication, online etiquette, research and referencing, critical thinking, constructive questioning, and the joint building of content. As opposed to the submission of a single course paper, weekly discussions offer students frequent opportunities to refine their skills. In a course at Seneca College in Ontario, students are expected to model industry standards in their online assignments.

Highlighting Achievements: e-Portfolios bring together assignments, projects, and other examples of student work and function as valuable tools for students to reflect on, as well as demonstrate and track progress throughout their academic careers. Online portfolios are used for submitting and commenting on assignments, with the additional function of highlighting student accomplishments to employers, other educational institutions, galleries and other venues. In Ontario, e-portfolios are used to help students, assess, and present their learning accomplishments in the faculty of Visual Arts and the Built Environment at the University of Windsor, the Faculty of Music at Wilfrid Laurier University, a specialized nursing degree program at Nipissing University, Linguistics and Language Studies at Carleton University and in Business Administration degree programs at Sheridan College.

Open badges are used to recognize skill development in Information Technology by immigrants with foreign qualifications at the Beuth University of Applied Sciences, Germany. The areas of skills development are established in consultation with employers.

Faculty Benefits: In addition to creating opportunities for students to excel, faculty and instructors benefit in other ways from online assessment. Marking is more flexible and mobile, without the need to carry around paper assignments. All submissions are returned electronically – and can also be stored online for future reference. Assessments can be more frequent, more easily tracked, recorded, collated, and reported, with learning analytics providing detailed analysis of individual and group progress, challenges, and comments. The reduction in the use of paper also rates highly with faculty.

Online assessment means that rather than evaluation being separate from, or only at the end of the learning process, it can be effectively integrated into the ongoing teaching and learning. In addition to earning grades, students become more self-aware and independent learners, increase their abilities as communicators and critical thinkers, and contribute to the analysis and creation of ideas and perspectives. Faculty and instructors, through their innovations, demonstrate how online assessment can further both independent and interdependent learning.

Ontario Public Colleges and Universities Featured in This Theme

Carleton University
- Improving Student Success in Financial Accounting with Online Learning at Carleton University

Carleton University
- Integrating ePortfolios at Carleton University in Ottawa, Canada

Carleton University
- Online Interaction to Enhance the Learning of First-Year Chemistry Students at Carleton University

Durham College
- Engaging Students in an Online Course on Wrongful Convictions at Durham College

George Brown College
- Mobile-Assisted Language Learning: Enhancing student learning with mobile phones

Lambton College
- Adapting Hybrid Models for Better Learning – Professors develop and test new models for teaching and learning at Lambton College

Niagara College
- Enhancing Instructor Feedback with the Sesame Digital Platform at Niagara College's Canadian Food and Wine Institute in Niagara-on-the-Lake, Canada

Nipissing University
- Providing Access and Flexibility: Innovative learning opportunities for nursing students at Nipissing University

Northern College
- Flexibility in the Design and Delivery of the Mining Engineering Technician Program at Northern College

Ontario College of Art and Design University
- Maximizing Student Learning at the Ontario College of Art and Design University: Getting the Most out of the Learning Management System

Seneca College
- Integrating Facebook and Twitter: Helping Students Learn How to Learn Using Social Media at Seneca College

Sheridan College
- Reflective Practice via Creative Learning Portfolios at Sheridan College's Pilon School of Business in Mississauga, Canada

Trent University
- Supporting Flexibility and Program Completion: Trent University implements a new approach to online learning

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University of Guelph
Student learning through Online Peer Evaluation Assessment and Review

University of Ottawa
e-Marking: Using iPads to deliver feedback on student assignments

University of Ottawa
iAnatomie: Providing online learning and testing options for Francophone medical students

University of Toronto
Developing Crowdmark, an Online Collaborative Marking Platform at the University of Toronto

University of Toronto
Peer Assessment and More with peerScholar

University of Waterloo
Marking assignments online to improve feedback for students

University of Windsor
Documenting Learning: Using e-Portfolios in Visual Arts and the Built Environment at the University of Windsor

Wilfrid Laurier University
Encouraging Student Independence: A blended learning model for Organic Chemistry at Wilfrid Laurier University

Wilfrid Laurier University
e-Portfolios for Lifelong Learning – Integrating e-portfolios for students in the Faculty of Music at Wilfrid Laurier University

Wilfrid Laurier University
Mathematics Online – The Supplementary Module Program for Calculus at Wilfrid Laurier University

Cross Canada Colleges and Universities Featured in this Theme

Simon Fraser University, British Columbia
Peer Evaluation as a Learning and Assessment Strategy at the School of Business at Simon Fraser University, British Columbia

Colleges and Universities from Around the World Featured in this Theme

Beuth University of Applied Sciences, Germany
Using Open Badges to Visualize Learning at the Beuth University of Applied Sciences, Germany and the Open Badge Network

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Dublin City University, Ireland

Designing, Implementing and Evaluating Contemporary Models of Teaching and Learning at the National Institute for Digital Learning at Dublin City University, Ireland

Kristiania University College, Norway

Innovations in Student Interaction, Support, and Evaluation at Kristiania University College in Norway

Theme 7
Faculty Development and Support

Professional Development and Training

Consulting

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Theme 7
Faculty Development and Support

Faculty, instructors and staff recognize that developing and delivering effective and engaging online and blended learning involves new pedagogies and strategies, focused on student-centered learning. To foster best possible results, intensive training workshops, one-on-one consultation, and online tools are offered by centered for learning and teaching and other services.

This summary highlights the myriad of opportunities, highlighted in the Pockets of Innovation Series, offered to faculty and instructors for training, support, and access to resources that facilitate their transition to online and blended learning and teaching.

Professional Development and Training: Amid differing approaches to faculty development among institutions, the Pockets of Innovation Series revealed some consistent principles:

- Blended or online formats are often used for training, so faculty experience the learning and technological benefits and challenges their students encounter;
- Faculty are encouraged to consider these new ways of teaching, assess their effectiveness for their courses and adopt the best strategies for their students and content;
- Online and blended learning are not seen as appropriate for all courses or students;
- Active, engaged learning by faculty is encouraged, with the training modelling best practices for subsequent teaching; and
- Collaboration and sharing among faculty is facilitated, often resulting in later communities of practice.

Many Ontario public colleges and universities offer certificate programs in both online and blended formats, with four to six courses on pedagogy, technology use, instructional design, assessment, and collaboration strategies; these may focus on online and blended learning, as at Lambton College and Western University, or incorporate them into a broader look at teaching and learning. In some cases, including Collège Boréal and La Cité collégiale, these programs are mandatory.

Ontario colleges and universities offer a variety of delivery formats for their professional development:

- Limited to faculty of one institution, such as the program at Ryerson University redesigned for blended delivery;
- Open to faculty at regional groupings of institutions, such as the program available at Sir Sandford Fleming College;
- Available, on a cost basis, to faculty from other institutions from Centennial College and Niagara College

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- Extensive program at Carleton University offered as an open educational resource for all institutions to adopt and adapt;
- Training for full-time faculty at St. Lawrence College focused on blended learning over two semesters, including a series of individual consultations and training sessions, as well as larger group sessions;
- Georgian College with two levels of training, including introductory modules on theory, basic processes of putting course information online, a single app or a skill such as online assessment, complemented by a second level of more extensive training and support for converting a course to online or blended delivery;
- The Ontario College of Art and Design University offering presentations by faculty members recommended by students for their effective use of the learning management system;
- Sheridan College, with a comprehensive portal providing access to resources, beginner and advanced information on the use of digital resources, and faculty training and support; and
- Canadore College, offering training on the use of the learning management system and all its components for course development and management, as well as for assessment and evaluation, collaboration, and communication.

Technology Enhanced Learning Design works as part of a team on all new modules at The Open University in the United Kingdom. Two of their recent initiatives integrate and assess strategies for adaptive and collaborative learning. The Learning and Teaching Academy at the University of the Highlands and Islands in Scotland functions as a hub where staff can access collaborative projects and consultation, professional development opportunities, funding and resources, and a framework for professional recognition. Staff in the Teaching and Learning Unit at the Athlone Institute of Technology in Ireland worked as part of an inter-institutional team to develop a Postgraduate Diploma in Learning, Teaching and Assessment to suit the requirements of staff working in the Institutes of Technology in Ireland.

In Costa Rica, the Fundación Omar Dengo uses blended learning to offer training on a nation-wide basis to practicing teachers on the most effective use of computers and software for student learning.

In addition to professional development, some faculty are supported in their online and blended innovations through funding, time release, research support, and, sometimes, secondment to the learning and teaching centre. They, in turn, become emissaries to their departments on the benefits of online and blended learning.

Consulting: Staff in the learning and teaching centres often work on a one-on-one basis with faculty to develop online and blended courses, offering expertise in pedagogy, instructional design, technology use for learning, graphic design, information technology, course assessment and

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revision, and other skills. Among Ontario institutions, Humber College, Loyalist College, and Ryerson University offer different models of how these services are provided. Faculty are also supported in building their own resources, such as games, simulations, tests, and mobile learning applications. At St. Lawrence College and Western University, the professional staff is supplemented by students who work with faculty to help them, as was said by one of these student advisors, "to create resources for excellent learning."

The Media Center at the Technical University of Dresden in Germany provides faculty with a complete service package, including digital teaching and learning support, research, design and production.

Resources: Staff at Ontario learning and teaching centres create extensive websites with online tools, guides, instructions, and examples, supplemented by links to articles, research, and resource banks at other institutions. For example, Mohawk College offers templates for course development, shells for development of tests, and sample rubrics for marking, along with information on their completion and use. At other Ontario colleges and universities, depositories of open educational resources, developed at the institution or recommended from other sources, are available. Many of the websites of the learning and teaching centres are open access, including those at Algonquin College and Ryerson University, making their wide collection of information and aids for online and blended learning available to faculty and instructors everywhere.

To assist program design and review in Computer Science at Dalhousie University in Canada, a curriculum map showing the inter-relatedness between specific learning outcomes, course content, and course and learning outcome sequencing is in use.

Faculty development and support are critical components of the integration of online and blended learning at all colleges and universities. Starting from a consideration of where, when, how, and, most importantly, for whom online and blended learning can be effective, faculty receive access to courses, consulting, and resources so they can provide students with flexible and interactive opportunities for successful learning.

Ontario Public Colleges and Universities Featured in This Theme

Algonquin College

Moving Ahead with the Digital College: Mobile learning, open educational resources, and online and hybrid learning at Algonquin College

Canadore College

Offering Choice: Providing students with options for access to learning

Carleton University

Online Interaction to Enhance the Learning of First-Year Chemistry Students at Carleton University

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Centennial College
- Reflective Practitioners: The Certificate Program in Teaching and Learning in Higher Education at Centennial College

La Cité collégiale
- Moving Online: Meeting student learning needs through online and hybrid courses

Collège Boréal
- Matching Pedagogy and Technology: Providing student choice for effective learning at Collège Boréal

Georgian College
- Faculty Training: Two-stage learning for faculty on designing and developing online learning courses

Humber College
- Serving Students and Faculty: The Centre for Teaching and Learning at Humber Institute of Technology and Advanced Learning

Lambton College
- Supporting Institutional Change: The Learning Innovation Centre at Lambton College

Loyalist College
- Virtual Learning Environment: Developments in virtual reality for learning at Loyalist College

Mohawk College
- eLearn@Mohawk: Moving to blended learning for student success

Niagara College
- Learning by Doing: Using a hybrid course for faculty learning about hybrid course development

Ontario College of Art and Design University
- Maximizing Student Learning at the Ontario College of Art and Design University

Ryerson University
- Re-Designing the Instructional Skills Workshop in a Blended Format for Faculty Development at Ryerson University

Ryerson University
- Setting the Stage for Student Success: Digital Education Strategies at The G. Raymond Chang School of Continuing Education

St. Lawrence College
- The Hybrid Learning Initiative at St. Lawrence College in Brockville, Cornwall and Kingston, Canada, Teaches Faculty the Finer Points of Designing Hybrid Courses

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St. Lawrence College
Students Helping Faculty Implement Hybrid Learning at St. Lawrence College

Sheridan College
Focusing on Faculty Development for Digital Teaching and Learning at Sheridan College

Sir Sandford Fleming College
Before, During, and After Class: Online resources for students and faculty

Western University
Supporting Online Teaching through Online Learning at Western University

Western University
Supporting Technology Integration – The Instructional Technology Resource Centre at Western University

Cross Canada Colleges and Universities Featured in this Theme

Dalhousie University, Nova Scotia
Daedalus: An Online Curriculum Mapping Tool from Dalhousie University, Nova Scotia, Canada

Colleges and Universities from Around the World Featured in this Theme

Athlone Institute of Technology, Ireland
The Postgraduate Diploma in Learning, Teaching and Assessment: The Experience of Athlone Institute of Technology, Ireland

Fundación Omar Dengo, Costa Rica
A Nation-Wide Teacher Training Initiative Focused on Enhanced Student Learning Led by the Fundación Omar Dengo in Costa Rica

Technical University of Dresden, Germany
Offering Digital Teaching and Learning, Research, Design, and Production at the Media Center at Technical University Dresden, Germany

The Open University, UK
From Idea to Application: Technology Enhanced Learning Design at The Open University, United Kingdom

University of the Highlands and Islands, Scotland
A Hub for the Enhancement of Educational Practice, Scholarship, and Research at the University of the Highlands and Islands, Scotland

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Theme 8
Models of Collaboration

Collaboration among Ontario Colleges and Universities

Regional Collaboration

National Collaboration

International Collaboration

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Theme 8
Models of Collaboration

Collaboration, on an inter-institutional, regional, national or international level, is a strength of online teaching and learning. Using online linkages, faculty jointly develop and share resources, courses and programs, resulting in increased options for students, reduced development costs and enhancement of expertise and experience.

The models of collaboration highlighted in the Pockets of Innovation Series present a wide variety of successful initiatives, with examples ranging from joint initiatives between two institutions to partnerships with national and international contributors.

Collaboration among Ontario Colleges and Universities: All 24 public colleges in Ontario are part of the OntarioLearn consortium, partnering to develop and share more than 1,200 online courses and several online programs to make them accessible to students across the province and beyond. Also in Ontario, Durham College offers the theoretical component of apprenticeship training for Industrial Mechanics online for use at Sault College, with both colleges offering the face-to-face components of the program locally so that students can work and learn in their own communities. As part of a consortium of 6 colleges in Eastern Ontario, Sir Sandford Fleming College develops and uses online modules from other partners for faculty training on issues of classroom management. Faculty at Carleton University and the University of Ottawa worked together to create online learning materials for students studying French as a second language, available as an OER.

Ontario's public colleges and universities work together to expand opportunities for student throughout the province. Through a collaboration between Northern College and Queen's University, graduates of college programs in mining technology have advanced standing in an online degree program from Queen's. Confederation College and Lakehead University cooperate to offer an online degree program in nursing to students in four communities in northwestern Ontario so they can study in their communities. Nipissing University works with 6 Ontario colleges, offering college Business Administration Diploma program graduates access to a specially designed, blended program to earn a Bachelor of Commerce degree.

Regional Collaboration: The University of the Highlands and Islands brings together 13 colleges and research institutes in the north of Scotland, sharing programs, services and providing a much wider range of choices and opportunities for students throughout the region. The development of the University from 13 independent centres to a full-fledged University moved through various stages as the need for centralized executive, policies, practices and support evolved. The role of the Academic Development unit at the University of the Highlands and Islands

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contributes to this collaborative structure by responding to such issues as organizational change, policy development, process and technology assessment and planning and development of new academic initiatives.

National Collaboration: The University of Ottawa is part of the Consortium national de formation en santé (National Consortium for Health Training), an alliance of 11 colleges and universities across Canada developing and sharing courses for French-language degree programs and professional development in health-related disciplines. In France, each of 8 Digital Thematic Universities brings together 25 to 40 partners from French higher education, with funding from the Ministry of Higher Education and Research, to develop as individual institutions or in national and international partnerships, OER accessible on a shared portal. Each thematic university specializes in a specific academic field.

One of the French thematic universities, uTOP, the Multi-partner University of Technology, brought together 26 academic partners, with over 100 external partners, to create almost 40 training options and over 80 resources, including master's degree programs, professional training courses and MOOCs.

International Collaboration: On an international level, York University in Ontario works with Australian partners to deliver a course on Global Environmental Change to refugee students on the Thai/Burma border, with collaborative work between Thai and York students as part of the design. At Wilfrid Laurier University in Ontario, a Globally Connected Active Learning Model is used for a course in Muslim Studies, linking students at Laurier and a university in Turkey, with online communication as the core of the teaching and learning.

Working with partner institutions in England, Greece, Denmark, Slovenia, Portugal and Sweden, academics at the Norwegian University of Science and Technology in Norway developed and offer a MOOC on Information Technology and Entrepreneurship, using a new course development method called Concurrent e-Learning Design.

In Italy, UNINETTUNO, International Telematic University, is an independent university built from a consortium of 43 Italian universities and private partners and now working with partners in the Euro-Mediterranean region and around the world in multiple languages to offer degree and professional development programs.

Ontario Public Colleges and Universities Featured in This Theme

Carleton University

- VidéoTech: Creating and sharing online learning materials for French-as-a-second language students by Carleton University and the University of Ottawa

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Confederation College
- From Access to Graduate Programs: An extensive array of learning opportunities for nursing and health science students

Durham College
- Linking Online and Experiential Learning: A hybrid model for apprenticeship education through a partnership between Sault College and Durham College

Lakehead University
- From Access to Graduate Programs: An extensive array of learning opportunities for nursing and health science students

Nipissing University
- Nipissing College Partnership Plan: Nipissing University's School of Business Partners with Colleges to Deliver a Business Degree Option

Northern College
- A Collaboration Between Northern College in Haileybury, Canada and Queen's University in Kingston, Canada Creates an Online Degree Program in Mining Engineering Technology

OntarioLearn
- OntarioLearn: 24 Public Colleges in Ontario Collaborate to Increase Student Access to and Choice of Quality Programs and Courses

Queen's University
- A Collaboration Between Northern College in Haileybury, Canada and Queen's University in Kingston, Canada Creates an Online Degree Program in Mining Engineering Technology

Sir Sandford Fleming College
- Before, During, and After Class: Online Resources for Students and Faculty

University of Ottawa
- Professional Development: Developing online resources for health professionals

University of Ottawa
- VidéoTech: Creating and sharing online learning materials for French-as-a-second language students by Carleton University and the University of Ottawa

Wilfrid Laurier University
- Active Learning in an Intercultural Online Environment at Wilfrid Laurier University

York University
- Intercultural Learning Online: Students on the Thai/Burma Border and at York University Share Their Learning

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Colleges and Universities from Around the World Featured in this Theme

Ministry of Higher Education and Research, France
Available to All – One Portal Featuring More than 34,000 Open Educational Resources Developed by Universities in France

Norwegian University of Science and Technology, Norway
Collaborative International Development of a Massive Open Online Course at the Norwegian University of Science and Technology

UNINETTUNO, International Telematic University, Italy
Delivering Learning to Students around the World through the International Telematic University UNINETTUNO in Italy

uTOP, the Multi-Partner University of Technology, France
uTOP – University Collaboration and Innovation Result in Online Learning Opportunities for Initial and Continuing Education in Engineering and Technology in France

University of the Highlands and Islands, Scotland
Building a Partnership of 13 Colleges and Research Institutes for Higher and Further Education at the University of the Highlands and Islands, Scotland

University of the Highlands and Islands, Scotland
Creating Policies and Initiatives at a University with 13 Partner Institutions: Academic Development at the University of the Highlands and Islands, Scotland

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Theme 9
Organizational Planning for Online Learning

Goals of Online and Blended Learning

Increase Access

Enhance Flexibility

Increase Student Engagement

Foster Student Success

Institution-Wide Change and Support

Quality Standards

Student Support Services

Faculty Support Services

New Resources

Effectiveness and Efficiency

Infrastructure and Physical Plant

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Theme 9
Organizational Planning for Online Learning

Five-year plans, institutional strategic documents, and plans for technology-enhanced learning at public colleges and universities in Ontario highlight online and/or blended learning as central to their mission and future. The adoption of these new approaches to education is framed around ideas of student-centered learning, with access, flexibility, engagement, and success as common themes across institutions. The goals and strategies also recognize the institutional changes required to facilitate and support successful integration of online, blended and technology-enhanced learning.

This summary highlights the goals for online and blended learning and the expectations for institutional change and support described in the plans included in the Pockets of Innovation Series:

- Algonquin College
- George Brown College
- Lambton College
- Mohawk College
- Ontario College of Art and Design University
- Queen's University
- Trent University
- University of Ottawa
- University of Toronto
- University of Windsor
- York University

At some public colleges and universities, separate Pockets of Innovation outline early and more advanced stages of plan development and integration.

Goals of Online and Blended Learning

Increase Access: Increasing student access is a key objective for online and blended learning, especially in first-year, large enrolment courses and those that are compulsory for several programs. Students in remote, rural, and Aboriginal communities, from other institutions, international students, as well as those with family, job, and community responsibilities, and those living far from institutions or working shifts are cited as target groups for enhanced access offered through online learning. Online learning is also positioned in institutional plans as offering mobility – access to learning anywhere, anytime, and though a multitude of devices.

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Enhance Flexibility: In many cases, public colleges and universities are responding to student demand for increased use of technology for greater flexibility in course offerings and student services. Plans encourage and support the integration of online and blended learning that expands the range of learning methods, content sources, class participation possibilities, and strategies for assignments and assessments.

Increase Student Engagement: The use of technology to offer students more engaging and participatory alternatives to lecture-based classes is highlighted in many institutional strategic documents. The plans also acknowledge that extensive support for students and faculty is essential, as well as an information technology infrastructure that facilitates online interaction and knowledge sharing between students and instructors and among students. Physical spaces on campus are to be adapted to support active learning, offering space for class discussion, projects, and problem-solving as part of blended learning models.

Foster Student Success: Institutional plans consider online and blended learning as essential to the goal of graduating students who are digitally capable and experienced, and able to use technological skills, as well as communication and cooperative skills fostered through online learning, in the workplace and for community and leisure activities.

Institution-Wide Change and Support

Quality Standards: Standards for online and blended course development and delivery, as well as the process for quality assurance, are clearly articulated in plans. The implications for curriculum planning, resource allocation, staffing, autonomy, course ownership, and academic freedom are addressed.

Student Support Services: Students need extensive training and resources on how to access and use technology, software and apps, as well as how to apply them for effective learning. Student services, along with registration, financial aid, counselling, and library services, need to be available online.

Faculty Support Services: Faculty need training and support on how to use technology for teaching and learning, software choices, instructional design, and the pedagogical approaches and changes inherent in using online and blended learning. Funding for development and research is also part of many plans.

New Resources: The development and/or integration of resources, such as e-textbooks, mobile learning, open educational resources, simulations, and virtual reality, is encouraged, implicating the library, IT, faculty, and other areas of the institution.

Effectiveness and Efficiency: The educational effectiveness and institutional implications of online and blended learning are often researched and analyzed, on a course-by-course and organizational basis.

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Targets and timelines, such as every student taking one online course before graduation or 20% of time in every program spent online, are established and measured.

Infrastructure and Physical Plant: The technological infrastructure often has to be re-configured and greatly enhanced to support teaching, learning, and administration. Printing services, charging stations, requirements for equipment, technology-friendly class and study space, classrooms that support group learning, and numerous other facility and services are all cited in plans.

In planning for increased online and blended learning, each college and university considers its specific student population, strengths and capabilities, and goals for the future. Arising from this diversity is an organization-wide approach to online and blended learning grounded in student-centered learning, striving to better meet needs and aspirations.

Ontario Public Colleges and Universities Featured in This Theme

Algonquin College
- Digital College: Organizational change for enhanced student learning and engagement

Algonquin College
- Moving Ahead with the Digital College: Mobile learning, open educational resources, and online and hybrid learning at Algonquin College

George Brown College
- Preparing Students for the Future: A Strategic plan for e-learning

George Brown College
- Consolidation and Alignment: George Brown College moves ahead with its Academic Computing Strategy

Lambton College
- Supporting Institutional Change: The Learning Innovation Centre at Lambton College

Mohawk College
- eLearn@Mohawk: Moving to blended learning for student success

Ontario College of Art and Design University
- Adopting a new learning management system

Ontario College of Art and Design University
- Maximizing Student Learning at the Ontario College of Art and Design University: Getting the most out of the Learning Management System

Queen's University
- Engaging First-Year Students: A Blended Learning Model for Active Learning

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Queen's University

Strategic Advancement: Moving Ahead with Blended Learning at Queen's University

Trent University

Supporting Flexibility and Program Completion: Trent University implements a new approach to online learning

University of Ottawa

Expanding the Online Course Inventory at the University of Ottawa

University of Toronto

Online Learning Opportunities for Undergraduate Students at the University of Toronto

University of Windsor

Testing New Tools to Support Enhanced Online and Blended Learning at the University of Windsor

York University

Accessibility, Engagement, and Learning: Moving Ahead with Blended Learning at York University

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Reflections on the Pockets of Innovation Series

The Pockets of Innovation Series was started by Contact North | Contact Nord in 2011 as online and blended learning moved from isolated projects to becoming a part of the daily conversation and activity at Ontario's public colleges and universities. The initiatives and experiments quickly accelerated due not only to greater awareness of the possibilities offered by online learning, but also by the growth in expertise, support for students, faculty and instructors, funding, institutional commitment and cooperative development.

Faculty, instructors, and staff in learning and teaching centres, libraries, information technology support units and other services, supported by management, are all essential players in bringing online, blended and technology-enhanced learning into the mainstream of post-secondary education in Ontario. The potential of new ways of thinking about and delivering education are enticing, but at the core of each innovator's activity is the expectation and confidence that, with effective design and delivery, students are better served.

This dedication to student access, flexibility, engagement and success is at the core of the Pockets of Innovations Series which highlights the myriad ways faculty, instructors and other developers work to accomplish these goals.

This collection of more than 185 innovation is a record of, and tribute to, the energy, creativity, skill and dedication to student success of faculty, staff, and management in Ontario public colleges and universities, as well as those in colleges and universities from across Canada and around the world who shared their stories.

The Pockets of Innovation Series shows how online, blended and technology-enhanced learning are making a difference through such factors as expanded access, higher retention, registration of new groups of students, and improved results. Acquisition of new skills, including critical thinking, assessment of sources, precise writing, and supportive feedback are nurtured, in addition to new ways of learning, creating, and sharing content.

The Pockets of Innovation Series was launched with three criteria of, first of all, featuring new approaches in online learning that, secondly, serve students and thirdly, that the developers are willing to share their innovations with colleagues. The first two criteria are integral to all innovations featured. The achievement of the final criteria is shown by the numbers of readers of each Pocket of Innovation as it is posted on Contact North | Contact Nord's teachonline.ca portal and featured in the bi-weekly newsletter, Online Learning News. As well, many innovators report contacts from colleagues around the world, resulting in the exchange of expertise, projects and resources.

The Pockets of Innovation Series continues to expand, as new examples are added to highlight the ongoing innovations of faculty and instructors from Ontario, across Canada and around the world.

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